IMPACT ASSESSMENT OF DAIRY FARMING ON THE ATTAINMENT OF SUSTAINABLE DEVELOPMENT IN INDIA

SYNOPSIS

SUBMITTED IN THE PARTIAL FULFILMENT FOR THE REQUIREMENT OF

DOCTOR OF PHILOSOPHY

IN

ECONOMICS

SUBMITTED BY

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2022

1.1 INTRODUCTION

The world witnesses the remarkable contribution of the livestock sector in an economy especially with reference to developing countries where the livestock sector contributes approximately one-third in agriculture GDP as estimated by the World Bank in 2017. The growing demand for livestock products in all over the world because of urbanization and the rise in consumer income. In developing economies livestock sector consider an important sub agriculture activity, providing additional income, employment, and nutrition to several people, particularly in rural areas (International Fund for Agriculture Development, 2018).

Being an important sector globally dairying is equally important for developing countries for eradicating rural poverty and income inequity by ensuring food security for millions of rural households, and enhancing economic growth in rural areas.

For millions of marginal farmers dairy is an important supplement source of income and employment. The dairy industry in India has a significant economic impact. The maximum production of milk comes from buffaloes than cow milk and goat milk. India produced a large variety of dairy products.

In India, dairy imports are negligible and under tariffs. The dairy domestic industry is governed by agencies such as the Ministry of Animal Husbandry, Dairying and Fisheries; the National Dairy Development Board; And the Food Safety and Standards Authority of India.

As of 2020, approximately 4.2% of India's gross domestic product was due to dairy production. In 2019, the Indian dairy sector was reported to be growing at 4.9% yearly. In the year 2018–19, the total milk production was 187.7 million tonnes and on a per capita basis, the milk availability was 394 grams per day as a mark by the government of India.

The Indian dairy industry has steadily developed since the White Revolution of the 1970s, making India the world's largest producer of milk with a 17% global share. With an annual production of 146 million tonnes of milk, India generates approximately US$70 billion of revenue in 2019.

The dairy sector also plays a significant role in achieving food security, reducing global poverty, creating employment opportunities for women, and providing a regular source of income for rural households. Apart from all the effects of the dairy sector, it is still described at its smallest level due to scattered and chaotic wet creatures; low margin; Scarcity and inappropriate animal and human services; Absence of

year-round beneficial producer costs for milk; Absence of Complete fundamental dairy framework and absence of expert in this area.

According to Bryans Judith (2019) "*We're not perfect, but as an industry, we continually push ourselves to improve. There are more stories of sustainability than emissions, but by cultivating our proficiency and our footprint we are undeniably part of the resolution to nourishing a growing global population with healthy nutritious foods*."

1.1.1 SUSTAINABLE DEVELOPMENT

The dairy sector identifies environmental and sustainability encounters related to the use of natural resources and the impacts arising as a result of the production of milk and dairy products in the market. Dairy farmers are active in mitigating climate-related impacts, assuming that they must consider sustainability in its entire complexity, including all its pillars - economic, environmental, and social. The literal meaning of sustainable development- ***encompasses the achievement of three interrelated objectives, namely, economic development, social inclusion, and environmental sustainability that are essential to the well-being of individuals and societies.***

Sustainability and protecting natural resources allow farmers to not only grow their businesses but also ensure the land's preservation for future generations. The dairy sector is constantly finding new conducts to improve sustainability: increase energy proficiency, condense greenhouse gas emissions, reduce water, save energy, and lower the operating costs for dairy farms. Manure use by dairy farmers not only to make fertilizers but also to produce biogas for clean energy.

For resolving all these issues there is need for a sustainability framework for dairy is required. The dairy producers aim to ensure that the safety and quality of their raw milk will satisfy the highest expectations of the food industry and consumers. Besides, on-farm practices should ensure that milk is produced by healthy cattle under sustainable economic, social, and environmental conditions.

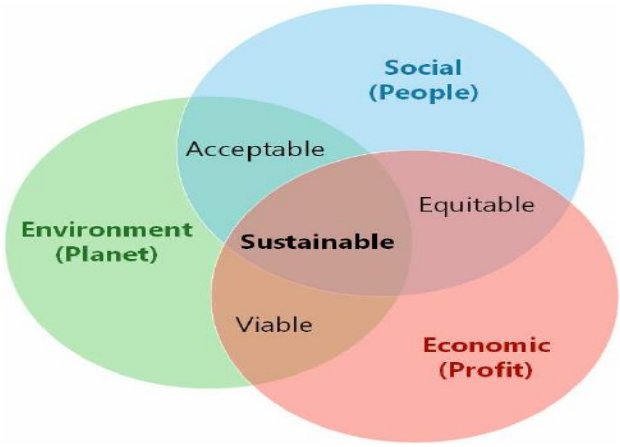


Figure 1: Dairy towards sustainable development
(Source - https://doi.org/10.3168/jds.2012-6354)

1.1.2 DAIRY SUSTAINABILITY FRAMEWORK

The Dairy Sustainability Framework is the GDAA Program 2015 (Global Dairy Agenda for Action) to align and link sustainability initiatives to demonstrate leadership and progress on a global scale. To that aim, the Sustainable Agriculture Initiative (SAI) Platform Working Group on Dairy has adopted the Guide to Good Dairy Farming Practice - a joint initiative of the International Dairy Federation (IDF) and the Food and Agriculture Organization of the United Nations (FAO), in 2004. This initiative of IDF/FAO used three particular elements of the Dairy Sustainability Framework; economic, environmental, and social sustainability.

Dairy Sustainability Framework (DSF) is in the process of high-level development. Indicators for eleven global sustainability criteria (Figure 2). These indicators will enable the sector to quantify overall global progress in 11 criteria. Two of the eleven global indicators were developed in 2016 and four developed in 2018. The five high levels Indicators included in 2019 they were:

• Soil - Quality and Retention

• Soil Nutrients

• Biodiversity

• Water Availability and Quality

• Working conditions

These 11 criteria enable Dairy Sustainability Framework to align the sector and openly report the global progress of the dairy industry in terms of sustainability. This process follows a continuous increase in

dairy production. Dairy Sustainability Framework captures the existing data of production from different geographies to benchmark progress against the baseline generated for each parameter. The scale of this project demands that the chosen indicators be both meaningful and measurable.

Global Criteria	High Level Indicator
GHG Emissions	IDF standard life cycle methodology
Soil Nutrients	Implementation of a Nutrient Management Plan to enhance production and reduce water and air pollution
Soil Quality	Soil quality is maintained or improved by good practices defined in a Soil Quality Management Plan.
Water Availability & Quality	1. Effluent Management Plan adopted to minimise impacts on water quality; 2. Water use efficiency for production and processing is measured
Biodiversity	A biodiversity plan is implemented to preserve, restore and improve biodiversity on-farm and across the supply chain
Working Conditions	A Farm/Facility Safety Plan is implemented to ensure worker safety
Animal Care	Somatic Cell Count (SCC) is measured to monitor animal health
Waste	Farm level: implementation of a Waste Management Plan Processor level: mass of waste to landfill per year
Market Development	Process in place to inform producers of market development opportunities and challenges
Rural Economies	Total annual payments made to farmers for milk
Product Safety & quality	1. Does the organisation have a product safety &quality recall plan? 2. How many public product recalls during the reporting period?

Figure 2: The 11 Criteria of the dairy sustainability framework
(Source: DSF (2017) Global criteria development report v.10)

The holistic approach of sustainable dairy framework encompasses the three dimensions viz. economic, social, and ecological aspects (Chand Prem 2015). Within each aspect of sustainability, attributes were identified and one or more measurable indicators for each attribute were selected. The selection of attributes was based on two important criteria;

a. the ability to measure each attribute on the farm using an indicator

b. of the ability of the farmer and the farm system to influence the level of the attribute.

Programs and projects under the Dairy Sustainability Framework (DSF) criteria can, directly and indirectly, address the sustainability dimensions. It focuses on the complex nature of sustainability criteria which has a single dimension. Due to the interdependencies across the sustainability activities of the dairy sector reported by the Dairy Sustainability Framework (DSF), one criterion can contribute to several goals and targets.

1.1.3 SUSTAINABLE DEVELOPMENT GOALS

The 2030 agenda for sustainable development, adopted by the UN member states in September 2015, promotes inclusive economic growth, social advancement, and environmental protection. It focuses on 5Ps of sustainability i.e., people, planet, prosperity, peace, and partnership. Its core ideas are unfolded in 17 Sustainable Development Goals, comprising 169 Targets. The Sustainable Development Goals signify a universally recognized integrated approach to attain sustainability.

Dairy sector efforts have been highly focused earlier on reporting the climate actions, as it shares accountability for environmental impact, as in any form of industry. The launch of UN goals shows a wider range of issues, captured under sustainability, and placed more emphasis on the social dimension by including such levels as peace and partnership.

Although the dairy sector attains all 17 Sustainable Development Goals but significantly dairy covers the following Sustainable Development Goals –

Table 1: Dairy Alignment with SDGs

ALIGNMENT	SUSTAINABLE DEVELOPMENT GOALS	
DAIRY IMPACTS ON SDGS	**GOAL 2**	ZERO HUNGER
	GOAL 8	DECENT WORK AND ECONOMIC GROWTH
	GOAL 12	RESPONSIBLE CONSUMPTION AND PRODUCTION
	GOAL 17	PARTNERSHIPS FOR THE GOALS
DAIRY EFFECTS ON SDGS	**GOAL 1**	NO POVERTY
	GOAL 3	GOOD HEALTH AND WELLBEING
	GOAL 5	GENDER EQUALITY
	GOAL 6	CLEAN WATER AND SANITATION
	GOAL 7	AFFORDABLE AND CLEAN ENERGY
	GOAL 10	REDUCED INEQUALITY
	GOAL 13	CLIMATE ACTION

Source: Global Dairy Platform

1.2 REVIEW OF RELATED LITERATURE

1.2.1 Studies Related to Significance of Dairy Farming

Milk production is a very important element of the whole dairy chain as observed by **Deshmukh M.S (2014)**. **Sharma Miriam and Vanjani Urmila (1993)** concluded that women are in the mainstreams of dairy development to improve their economic, nutritional, and social status, further it is elaborate by **Payal Jaiswal (2018)** that dairy contributes significantly to farmers' income and create livelihoods for their families. **Corinne L. et. al (2009)** explored the role of communication in the empowerment process of female dairy farmers in India, through a program that particularly draws on the theoretical perspectives of Paulo Freire and Saul Alinsky regarding empowerment. In the same direction **Jadav. S.J. (2013)** and **Singh Sahab (2013)** stated that women empowerment through micro-entrepreneurship and the role of micro-entrepreneurship among rural women. **Fatima Saneem and Akhtar Md. Wasim (2014)** concluded that the income of women is dependent on the number of cattle reared, but the quantity of milk does not vary directly in proportion to the number of cattle reared. **Yasmin Sarah and Ikemoto Yukio (2015)** discovered the role of small-scale dairy farming and related factors in promoting employment in this sector. **Dash Sasmita, Sarangi M.K (2017)** stated that dairy farming has been an important source of income for rural resource-poor, less skilled, less educated farmers. **Bain Carmen et.al (2018)** identified that dairy cows provide important economic benefits to households but increase women's time poverty. **Dohmwirth Carla and Hanisch Markus (2019)** and **Jadav S.J. et.al (2014)** investigated that dairying in India is a female-dominated enterprise. The most prominent sector of the Indian economy has large data gaps in the areas of feed availability and collection, size and price structure of dairy production enterprises, and on supply and consumption of most dairy products as observed by **Landes M (2017).**

1.2.2 Studies Related to Dairy Sustainability Framework

Dairy Sustainability Framework is a holistic approach providing a global framework for sustainability in the dairy sector. **Miller Gregory D, Auestad Nancy (2013)** focus on organic dairy products which are affordable and nutrient enable produce by the dairy industry worldwide by involving the public and private sector. **GDAA (2015)** observed that dairy contributed as a source of income, women empowerment, reduced hunger, and a key to nutritional security. **Otte Joachim and Ahuja Vinod (2016)** suggested a 'common framework' is intended to provide strategic guidelines to national governments and other stakeholders to help them develop and/or adjust their strategies and programs in

the light of broader regional and global trends and specific national priorities. **Jonker Jamie et.al (2019)** analysed the importance of the dairy industry framework which provides a roadmap for how the industry needs to address key issues related to prioritizing particular actions to meet specific market demands.

The **International Dairy Federation (2019)** provides a perspective on sustainable development of relevant importance to national initiatives for sustainable dairy related to national sustainability programs, climate-neutral development, biodiversity improvement, food waste reduction, women empowerment through the dairy sector, creation of a sustainable workplace, commitment to recycling. **Global Dairy Platform and IFCN Dairy Research Network (2020)** analysed that Dairy is an important ingredient globally Sustainable food system. Dairy Sustainability Framework highlights nutritional production value in sustainable and responsible. **Katarina Arvidsson Segerkvist et.al (2020)** concluded that modern dairy farming is associated with major sustainability challenges including greenhouse gas to develop emissions for sustainable future production and to map literature on environmental, economic, and social sustainability at the agricultural level in dairy farming. **Tan Albert** and **Ngan Pham (2020)** proposed a framework model for dairy supply chain systems for dairy products that have been overlooked despite being important to everyone since they are consumed widely all over the world.

1.2.3 Studies Related to Sustainable Dairy

The milk is produced by healthy livestock under economic, social, and sustainable environmental conditions. **Koyi N. et.al. (2010)** and **SAI Platform Dairy Working Group (2015)** marked that dairy must be in a sustainable manner in production and distribution and it can be only possible through adopting sustainable dairy farming for the mainstream market in all regions of the world. **Karim Jainab et.al. (2015)** analysed that the farmers in favour of sustainable practice in dairy farming and the sustainability in the dairy farming sector can be achieved through three elements of sustainability i.e., environmental, economic and social. **Bellamy Kevin and Bogdan Elena (2016)** stated that the SDGs represent an internationally recognized integrated approach to sustainability and one this concept used in dairy it is related to climate action, hunger, health, wellbeing, and decent livelihoods. **The European Dairy Sector (2017)** and **Nisa Syeedun, (2017)** identified that the European dairy sector accepts its

responsibilities and has continuously worked on greater sustainability through various international, as well as national, initiatives.

Sustainability in livestock farming is a highly challenging task in the face of climate change. **Garai Sanchita et.al. (2019)** and **Behera Basanta et.al (2019)** explained that the dairy-based Sustainable Livelihood Security Index (SLSI) is not only highlighting the state of sustainability of dairy-based livelihood but also emphasized the area where necessary policy matters to be intervened for improvement of livelihood of dairy farmers.

The overall sustainability of the dairy sector is based on the innovative potential of the sector and the stability of the relationship between dairy farmers and processors. **Pappa Ioanna et.al. (2019). Moerkerken Albert et. al. (2021)** addressed that the dairy sector is aiming for improved energy efficiency and sustainability.

1.2.4 Studies Relate to Linkages Between Dairy Sustainability Framework and Sustainable Dairy

The GDAA (2015) explained that the Dairy Sustainability Framework (DSF) would enable the dairy sector to take an all-inclusive approach to sustainability through the alignment of a language, universal sustainability activity, and through it generate a common sustainability commitment that can be expressed globally, but regionally, nationally And also at the organizational level. **The Dairy Working Group -SAI Platform** developed Sustainable Dairy Partnership: Business to Business to streamline relationships between buyers and processors. The Sustainable Dairy Partnership (SDP) is based on the Dairy Sustainability Framework (DSF) and its 11 Sustainability Principles.

Hamann Jörn and Bansal Baljinder Kumar (2016) observed that Given the increasing demand for milk and milk products, India has the potential to increase milk production. with significant changes in our environment (e.g., climate, soil erosion, water quality, etc.) sustainable agriculture is the only way to produce enough food for all. **Bellamy Kevin (2016)** states that the Dairy Sustainable Framework criteria are very significant to solve complex issues of environmental challenges to attain Sustainable Development Goals. **Eda (2018)** identify that the European dairy sector is continuously working on DSF and improving its long-term environmental, economic and social sustainability. **Reyes Ernesto (2019)** examined the important role dairy development plays in lifting rural families and communities out of poverty.

Several studies have attempted to link the dairy sector with women empowerment, livelihood, and sustainable development but very few studies have linked dairy sector performance with global parameters such as DSF (dairy sustainability framework).

Therefore, after reviewing the related literature, the researcher has identified the following research gaps-

Research Gap

- Why the performance of dairy farming is important to the Indian economy?
- How well Dairy Sustainability Framework (DSF) enable the dairy sector to take a holistic approach towards sustainability?
- What strategies can be adopted by dairy farmers to achieve sustainability in dairy farming?

1.3 RATIONALE OF THE STUDY

Dairying is one of the fastest-growing industries which provides many opportunities to the people and leaves a lasting impact on society, the environment, and the economy. Today, India is recognized as the 'Oyster' of the dairy industry worldwide.

While poultry and dairy farms are flourishing across the country, their sustainability remains an issue to be addressed. In particular, dairy farming requires large amounts of animal feed, food supplements, antibiotics, and other inputs. The dairy farming industry in India has developed extensively in the last few decades to produce the largest livestock population in the world. After witnessing continuous success in milk and livestock production over the years, the industry is now facing many challenges.

Poor quality of fodder coupled with a chronic shortage of animal feed has become a major obstacle in dairy farming in India. In the current system of exhaustive livestock production, concentrated food is heavily stressed, which has increased the cost of milk production and significantly reduced the profits of farmers. The rising cost of feed material and its seasonal variability also add to the severity of the situation.

Intensive dairy farming requires keeping cattle in a confined facility for optimum productivity. However, these tightly packed facilities are overcrowded and stressful to animals, making the disease easy to spread. When thousands of cows are packed into feedlots filled with manure and urine, bacteria can easily thrive. Because over-crowded animals are vulnerable to infection, most industrial livestock

facilities treat cattle with low-level antibiotics to prevent disease and promote weight gain. This not only creates a breeding ground for antibiotic-resistant bacteria but also produces milk filled with chemicals. Sustainable dairy farming in India is a new concept that predicts the proper and efficient use of resources without excessive exploitation. While this modern dairy farming method may seem sophisticated in its approach, most of its key elements derive from traditional farming methods. Perceiving all these shortcomings from dairy farming it is significant to study the performance of dairy in the attainment of sustainable development to secure resources for the next generation because dairy farming has the potential to reinvigorate rural economies, providing sustainable livelihoods for smallholder farmers and a resilient source of economic growth.

This can be possible by adopting Dairy Sustainability Framework (DSF) based on 11 criteria highlighting synergies and potential opportunities for further development. Directly, or indirectly, these activities aim to solve complex social, economic, and environmental challenges, referring to multiple sustainability goals in these three dimensions. In this way, sustainable dairy farming can not only be economically feasible for small farmers but can also be environmentally friendly by reducing carbon footprint and increasing organic fertility.

The dairy sustainability framework (DSF) has a great impact on achieving sustainable development and preserving resources for the next generation and the wellbeing of livestock. The existing literature review on the engagement of these two dimensions is limited in terms of providing strong empirical evidence on the effects and implications of initiatives taken in this direction. The present study is an attempt to assess the impact of dairy farming on the attainment of sustainable development. Moreover, to fill the research gaps, it is necessary to study the synergies between Dairy Farming and Sustainable Development.

The present research work will be beneficial for government officials, prospective dairy entrepreneurs, and government policymakers in formulating future policies/programs/projects for sustainable dairy farming in Uttar Pradesh.

The proposed model to examine the impact of the Dairy sustainability framework in the attainment of sustainable development that will be used by the researcher is as shown in table 3.

Table 2: Assessment of Dairy Farming through Dairy Sustainability Framework (DSF) 11 Criteria's

DIMENSION OF SUSTAINABLE DEVELOPMENT	DSF 11 CRITERIA'S	FOR MEASURING THE PERFORMANCE OF DAIRY
ECONOMIC	Rural Economics	
	Market Development	
SOCIAL	Animal Care	
	Working Condition	
	Product safety and quality	
ENVIRONMENT	Biodiversity	
	Waste	
	Water	
	Soil	
	Soil Nutrition	
	Green Gas Emission	

1.4 OBJECTIVES OF STUDY

The present research work will be based on the following objectives -

1. To study the status of the dairy sector in the Indian Economy.

2. To study the Dairy Sustainability Framework criteria.

3. To study the impact of the Dairy Sustainability Framework in the attainment of sustainable development in India.

4. To study a case study of the CUPID dairy system model working as per Dairy Sustainability Framework.

5. To Identify the problems for effective implementation of the Dairy Sustainability Framework in India.

6. To compare the Indian dairy performance with global dairy for a better perspective.

7. To suggest strategies for attaining Sustainable Development Goals (SDGs) in India through the Dairy Sustainability Framework (DSF) criteria.

1.5 HYPOTHESIS OF STUDY

To make the study more scientific, the following null hypothesis has been formulated-

H_0^1: There is no impact of the Dairy Sustainability Framework on attaining Sustainable Development.

$H_0^1{}_{a:}$ There is no impact of the Dairy Sustainability Framework on attaining social sustainability.

$H_0^1{}_b$: There is no impact of the Dairy Sustainability Framework on attaining economic sustainability.

$H_0^1{}_c$: There is no impact of the Dairy Sustainability Framework on attaining environmental sustainability.

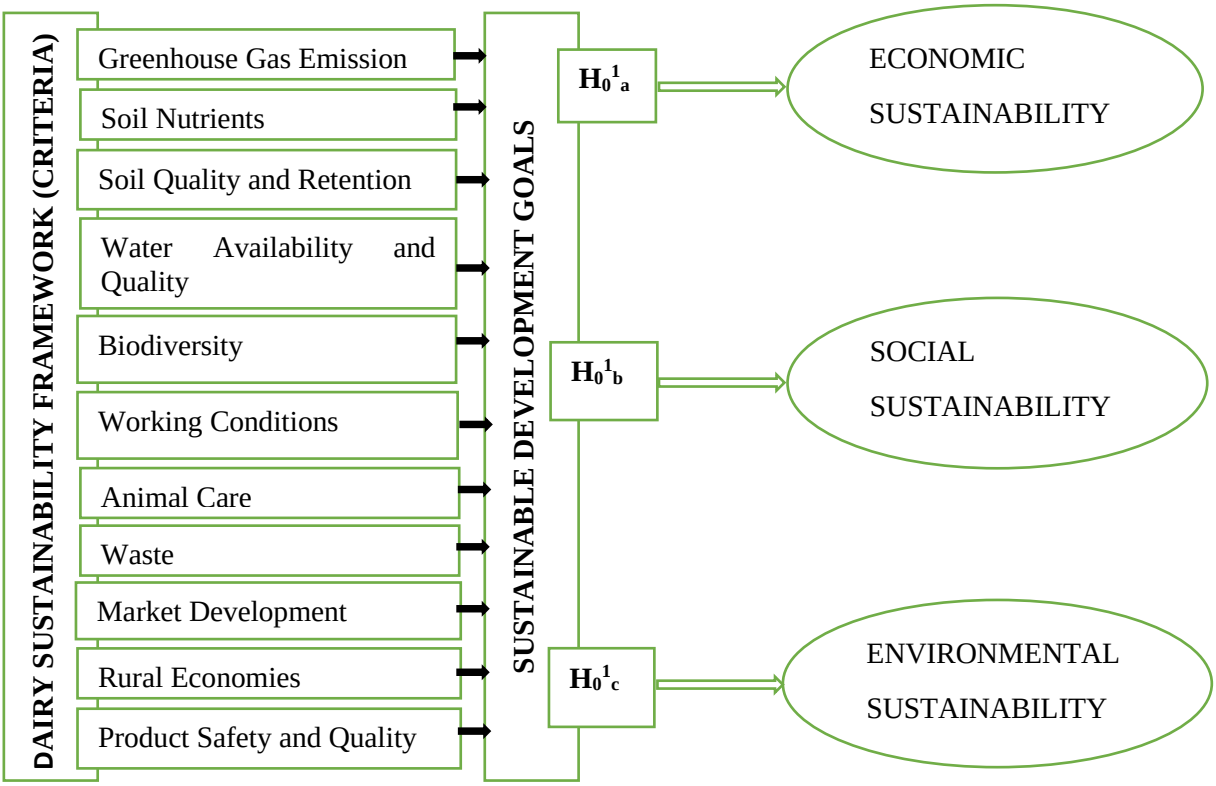


Figure 3 - Alignment of Dairy Sustainability Framework (Criteria) with Sustainable Development

1.6 RESEARCH METHODOLOGY

The entire assessment analyses the impact of Dairy Sustainable Framework and Sustainable Development goals is based on primary as well as secondary data. The Impact Assessment will be measured through focused group discussions, field observations, and analyzing the role of dairy in attaining Sustainable Development.

RESEARCH TYPE: Descriptive and Analytical

VARIABLES: The present study is based on the following assumption-

Independent Variable: Dairy Sustainability Framework

Dependent Variables: Sustainable Development

1.6.1 SOURCES OF DATA

- **Primary**: The primary data will be collected through structured questionnaires and interviews of employees and workers of Registered Dairy.
- **Secondary**: The secondary data will be collected to study the status of Dairy Sustainable Framework and Sustainable Development Goals from various published and unpublished

records of government and non-governmental organizations, annual FAO bulletins, articles, internet, magazines, research papers, books, and from various reputed journals, etc.

1.6.2 STUDY REGION: Uttar Pradesh, India.

Uttar Pradesh is the highest milk producing the state of India has the highest milk production in all over India, producing 18% milk production as compared to other states of India such a Rajasthan11%, Andhra Pradesh10% Gujarat 8% and Punjab 7%. It has the largest dairy and it is home to the highest buffalo population and the second-highest cattle population in the country. To boost the state's rural economy, Chief Minister Yogi Adityanath on 18 September 2020, during an interaction with dairy farmers, said that the government was also in the process of establishing eight Greenfields dairies in utter Pradesh. According to Market Outlook Report 2021-Uttar Pradesh dairy market size of USD 144.55 billion in 2020. The dairy industry of India is expected to grow at CAGR of 6% in the years 2021 and 2026 with the expected valuation for the year 2026; USD 205.04 billion.

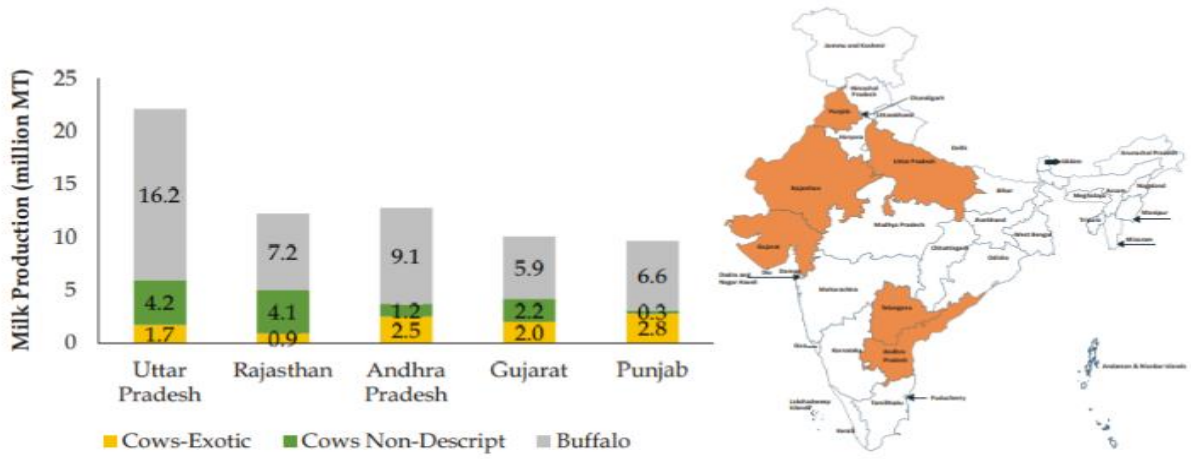


Figure 4 -Top 5 Milk Producing States in India
(Source- Department of Animal Husbandry, Dairying and Fisheries)

For above all reasons Uttar Pradesh is considered the study region for the present study. The select registered dairies from different districts of Uttar Pradesh based on their milk production of more than 7 lakh metric tons will be selected for the present study.

Table 3: Milk Production in Uttar Pradesh more than 7 lakh Metric Ton

S.No.	Name of Districts	Milk Production (in'000 Metric Ton)
1.	Agra	685

2,	Aligarh	670
3.	Bulandshehar	1285
4.	Etah	744
5.	Ghaziabad	663
6.	Meerut	734
7.	Moradabad	633
8.	Muzaffarnagar	980

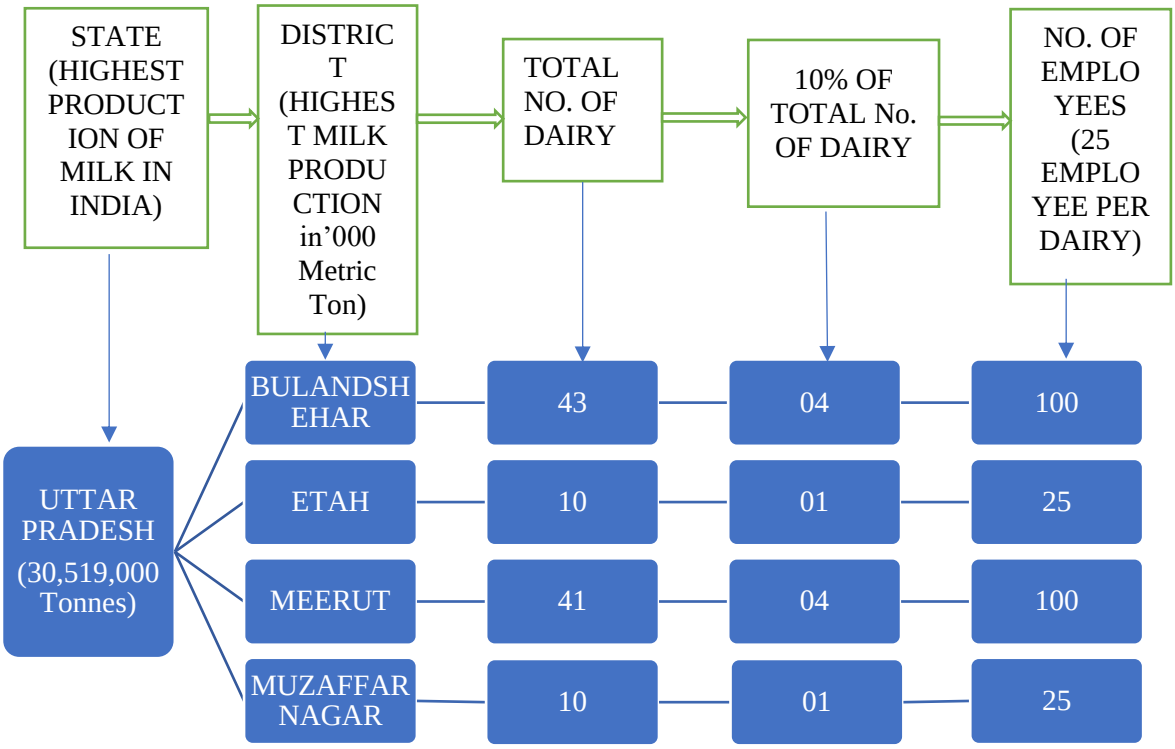
1.6.3 SAMPLING TECHNIQUES

Purposive and Multi-stage stratified random sampling techniques

Purposive and Multistage stratified random sampling techniques will be employed for the present research work. To conduct a study of the highest Milk Producing State, Uttar Pradesh has been selected purposively and 4 Districts of Uttar Pradesh (Bulandshahar, Etah, Meerut, and Muzaffarnagar) were selected through stratified random sampling and no. of Dairy from each District (10% of total dairy in the district) and No. of Employees (i.e., 25 Employees from each dairy, 5 people are from administration and 20 dairy workers engaged in mulching, cleaning, packaging, and supply) have been Randomly Selected as sample population for the present study. The total number of dairies per district has been taken according to the website provided by the CDO office i.e., ahgoshalareg.up.gov.in

1.6.4 SIZE OF SAMPLE: 250 Respondents

Table 4 – District wise Number of Respondents for Data Collection



1.6.5 RESEARCH METHODS AND TOOLS FOR DATA COLLECTION

The survey method will be used and data will be collected through a schedule/questionnaire and a structured interview.

1.6.6 STATISTICAL TOOLS: The appropriate descriptive and inferential statistical tools will be used for analysing data -

- Averages
- Pearson's Correlation analysis and Multivariate Regression analysis
- Multivariate Technique – Canonical Correlation
- Likert scale
- One way ANOVA
- Structure Equation Model
- System Dynamic(hierarchical) Approach

1.6.7 COMPUTER APPLICATIONS: MS-Excel, SPSS

1.7 PROPOSED CHAPTERS

Chapter 1: Introduction

Chapter 2: Status of Dairy Farming in India

Chapter 3: Impact of Dairy Sustainability Framework (DSF)11 Criteria on Sustainable Development in Dairy Farms

Chapter 4: A Case Study of Cupid Dairy as Example of Dairy Sustainability Framework (DSF)

Chapter 5: Comparative Analysis of Dairy Sustainability Framework (DSF) With Global Data

Chapter 6: Conclusions and Recommendations

Table 5: Proposed Model of Study

Chapter No.	Chapter Title	Data Type	Tools
Chapter 1	Introduction	Secondary	-
Chapter 2	Status of Dairy Farming in India	Secondary	-
Chapter 3	Impact of Dairy Sustainability Framework (DSF)11 Criteria on Sustainable Development in Dairy Farms	Primary	Self-Structured Questionnaire
Chapter 3	Challenges of Dairy Sustainability Framework (DSF) In India	Primary	Self-Structured Questionnaire
Chapter 4	A Case Study of Cupid Dairy as Example of Dairy Sustainability Framework (DSF)	Primary	Self-Structured Questionnaire
Chapter 5	Comparative Analysis of Dairy Sustainability Framework (DSF) With Global Data	Primary + Secondary	-
Chapter 6	Conclusions And Recommendations	Primary	-

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